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ABSTRACT

Collected are four conference speeches which in various ways attack the developmental perspective that views genetics as a source of stability and environment as a source of change. Dr. Bonnie E. Litowitz's discussion of "Context and Continuity: Changing Perspectives on Children" explores differences among development, learning, and evolution to account for the importance of the concepts of interaction and context in contemporary research on children. Discussing the "Development of a Transactional Self," Dr. Jerome S. Bruner argues that the nature of the development of self is such that it becomes possible to maintain continuity in development while providing the basis for change. In "Children and Social Networks," Dr. J.P. Comer asserts that there is too little research on the life and development of children in their social networks beyond the family or on the skills and interactions needed to function adequately in those social networks in the complexity of contemporary, urban society. Particular attention is given to the success of the Yale Child Study Center team's intervention efforts in inner-city schools. In conclusion, Dr. Michael Cole's description of "A Socio-Cultural Approach to the Study of Re-mediation" argues that information processing theory and systems of remedial reading instruction fail to see reading as a process of interpreting the world. He describes research documenting the effectiveness of incorporating that view in remedial interventions. (RH)

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Established in 1966, Erikson Institute is named for Erik Erikson, the renowned psychoanalyst whose research and writing have profoundly influenced the study of human development.

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TABLE OF CONTENTS

Bonnie E. Litowitz, Ph.D.
"Context and Continuity: Changing Perspectives on Children".....1

Jerome S. Bruner, Ph.D.
"Development of a Transactional Self" 18

James P. Comer, M.D.
"Children and Their Social Networks" 34

Michael Cole, Ph.D.
"A Socio-Cultural Approach to the Study of Re-mediation 51

Context and Continuity: Changing Perspectives on Children

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There has been a geometric expansion of our knowledge about children in recent decades. We have so much information that it is not always clear what to do with it -- how best to apply it in children's lives, or where we are headed in the future: What are the new directions in studying children? What ever happened to the old ways.

We will hear during this conference even more, new and exciting information about children and families. It may be appropriate, then, to start off with an overview of shared themes, assumptions and issues: in other words, to put the conference in context.

Whether we wish to intervene or simply to observe, to increase our knowledge of children or of ourselves as ex-children, to study children is to seek descriptions and explanations of change. The simplest definition of development is: change over time. It becomes slightly more complicated when we say change in what: mental structures, cognitive capacities, specific competencies, psychological functions, or abilities to process information.

Yet, to say that developmentalists study change over time does not really differentiate them from others who also study change over time, such as learning theorists or evolutionary biologists. It turns out, however, that in exploring how development, learning and evolution differ, we can trace the recent history of our changing perspectives on children in the past decades. And, it is these thoughts I would like to share with you this morning.

For, whereas both learning and development are concerned with change, they differ as to who is responsible for that change -- adult or child -- and thus ultimately in the motivation which explains change. Earlier developmental theories, influenced by neurophysiology, envisioned motivation from within the child, while learning theories, influenced by behaviorism, saw the adult as instigating change. Rising above this dialectic, current developmental theories see motivation arising out of interactions of both child and adult, working as a system. Thus, the old distinction between learning and development no longer holds.

A major difference, as we shall see, between development and evolution -- on the other hand -- is built out of this new synthesis of adult-child interaction, and concerns the adaptation of an organism to its environment. In simpler organisms, adaptation is a result of direct interface between organism and environment. But in humans with their highly elaborated, symbolic worlds, interface with the environment is mediated by interactions with others. Through interactions, contexts, as varied as the cultures and subcultures we see around us, are constantly defined and redefined.

My discussion this morning, then, will briefly trace this history which has brought us to our new direction in studying children, emphasizing interaction and context. At the end I will comment on the potential and the pitfalls we face as we try to integrate our wealth of information from many disciplines and professions into a new approach.

The relationship between development and learning has undergone much revision in our conceptualizations about young children. We used to believe that development referred only to postnatal growth which was on a neurophysiological timetable, continuing after birth processes set in motion at conception. That is, development was defined as an unfolding of abilities and properties according to an innate blueprint. Typical examples of development come from neurology and physiology:

* Mylenization of nerves is not complete at birth and takes several years, continuing ex-utero processes begun in-utero.
* It takes years for left and right hemispheres of the brain to fully lateralize with predominant functions for each and communication between them by neurotransmiters.
* Control of one's body progresses in an invariant order from control of head and eyes, to hands and coordination of eye and hand, then to lower body, feet, etc.; from gross motor to fine motor coordination.

Development has been described as unfolding in fits and starts creating stages marked alternately by conflict and calm, change and quiescence, which seem to indicate an emerging function and then its consolidation or integration with other functions. One should provide for continued ex-utero development an environment which would permit this unfolding; but it is not clear whether direct adult intervention can substantially alter these programs.

Learning, in contrast, covered what was not preprogrammed but was felt to be under the control of an adult who could train or teach the child according to smoother, more asymptotic learning curves or schedules. Language and the accumulation of information were two major categories subsumed under learning.

I started out from this perspective, but two events changed these views for me forever. In 1959 Noam Chomsky declared that whatever else children learn from adults, language cannot be included in that list. Language is acquired, not learned, meaning it falls under development, not learning. In an even more sweeping revision, Jean Piaget, through his monumental studies of young children, reclassified the rest of the growth of intelligence from learning into development. Children, we are told, with demiurgic force, extract from the environment what they need to fashion a universal language and intellectual system marked by stages of development. Each stage is characterized by the emergent mastery of a developmental task: coordinating actions or learning basic syntactic structures. Each subsequent stage is built upon the elaboration and consolidation of the previous masteries. For example: intellectual operations are built on earlier actions just as an explosion in vocabulary and more subtle morphosyntactic rules are made possible by early grammars. The later integration of these capacities enables the reversibility of operations and, for example, in language, the syntactic reversibility of active and passive moods. It is perhaps not coincidental that this later period of integration marks also the maturation of the frontal cortex, implicated -- to quote a recent author -- "in the highest level of goal-directed sets including complex

sequencing, the creation of long and short term plans, and the internal manipulation of representational systems...basic to abstract thinking" (Hadley, 1983:26).

The potential convergence of evidence from neurology, biology, psychology, psychoanalysis and linguistics is appealing and continues to excite researchers who focus attention on development over learning. Learning often seems, in fact, to disappear, replaced by cognitive development and cognitive science. Parents and teachers are often advised to just stand back and not get in the way of unfolding development; adults provide the context for development -- the "aliments" (food) as Piaget has said. Children are seen as little autodidacts, doin' what comes naturally!

Alas, we will not so easily solve the conundrums that have puzzled philosophers for centuries by simply shifting away from learning towards development. Buried in our developmental theories lie philosophical skeletons: the relationship of mind to body (in the case above, brain); and the relationship of biology to culture, otherwise known as our old friends, nature and nurture.

For, what happens when development doesn't unfold as theory dictates? Do we assume that these children are simply born with poorer or defective innate programs? We feel we must intervene, and in intervening we find that we can make a difference. Some examples:

* Parents who are helped to understand the difference between their needs and those of their children can become more effective in meeting children's needs.

* When parents talk to their children more, using language for multiple functions (to get things done, to direct bvehavior, to make personal contacts), children's verbal abilities improve earlier and faster.

* Early child-care and preschool programs like Head Start do make a difference, not only in school performance but in overall adjustment to society and its institutions.

* Teachers who restructure the learning situation -- materials, instruction, setting -- can enable children with learning problems to become more successful students.

* Children who appear to be at one operational level of competence can perform at a higher level with specific adult guidance.

In examining interventions, we find that we must amend our earlier theories. Adults, so important in learning, turn out to be significant factors in development as well. When we look more closely, children who seem to be developing through their own interaction with the environment are really benefitting from adult interactions in the process. The separateness of the individual infant resulting from physical birth had tricked us into viewing the child as a monad. We saw her/him all alone, on the one hand, dealing with the objective world, including physical and human objects, on the other. The child, we now see, must form a dyadic relationship with a caretaking adult; psychic, social and cognitive development take place in that unit. The complex workings of that dyadic unit preoccupy us now as we study interactions. However, as part of that unit -- the caretaking adult -- is also part of the environment or context, and so we are forced back to a more careful reexamination of context as well.

The caretaker's reemergence as important in cognitive development can be seen beginning in the late 1970's. For example, Bruner claimed of language development:

"There may indeed be something innate about the child's ability so swiftly to crack the linguistic code. But there is almost certainly something innate about the mother's ability to help him to do so" (1978:83). In fact, research in language development of the late 1970's underwent a radical shift from innate competence to minute studies of motherese, some of which came very close to old fashioned, pre-Chomskian behaviorist language learning. The same might be said of many studies of mother-infant behaviors during the late 1970's. In other words, we used to see development and learning as different. Then we gave up learning for development but found we had given up too much: the adult and the contextual environment. But as soon as we introduce the adult environment in our theories, it seems we run the risk of simply shifting from development to yet another version of conditioned learning.

Our goal is not to be stuck forever on that see-saw, but to form a synthesis. Therefore, supplementing rather than replacing earlier theories, we now turn to Vygotsky and the tradition of Soviet Psychology which he spawned and for which his name is emblematic. For all that we have learned from Piaget, we miss in his theory: the role of parents and other adults (who we find do make a difference); the formative use of symbol systems (unique to and therefore definitive of humanness); and a fuller understanding of context (which we now insist must be more than merely static background for independent development).

Piaget invoked biological adaptation to explain development. The same principles which regulate all organisms in relating physically to their environments, regulate cognitive adaptation as well. In essence, Piaget is saying, development is like evolution. Organisms must seek a state of equilibrium between their inner world and "umwelt" (the outer environment). Some authors have rephrased this as: the environment poses questions to which the organism must respond. Accommodation and assimilation are the basic modes of response, both biologically and cognitively. Even psychological structures are said to develop to regulate inner and outer tension states; a specific internal agency (the ego) has as its function adaptation to external reality.

Now, the gain is considerable in such an elegant theory -- elegant because parsimoniously it uses the same principles to explain disparate pheomena. What is obscured, however, is just now beginning to be questioned. Development is no more evolution than it is learning, even though some similarities may obtain. First of all as others have observed, evolution concerns populations while development concerns individuals; and individuals can show enormous variation compared to population norms. But more importantly, we don't know how evolution will turn out. Homo sapiens may be the apogee or, like the Dodo, just another dead end. Yet, everyone of us knows how development will turn out -- just like us! Parents know their children will be like them, or better versions of themselves. Theorists know, of course, and often they hypothesize a child who develops surprisingly into a little linguist, a little cognitive psychologist or mathematician. Is it a coincidence that Piaget, whose early work was on mollusks and later worked with mathematicians of the Bourbaki group, posits an ideal child who begins with a biological reflex and ends with mastery of logical transformations in the INRC group (identity, inverse, reciprocal, correlative transformations)?

I say this not as a criticism but to illustrate the similarities between theorists and parents. Parents' theories about children, it turns out, have great impact on how children develop. Parents' theories, fantasies, wishes, needs, etc. transmitted in rich symbolic systems are part of the environmental context which makes psychosocial and cognitive adaptation (i.e., development) different from just the biological change shared with other organisms (i.e., evolution). So the biological principles of evolution alone will not explain development.

Now we see development not as internally driven but as "outside - in", which Kenneth Kaye has described dramatically as follows: "The theater of development is not internal. It is an outdoor stage, and the parent is very much the director cuing the entrances and exists of the participating audience's favorite characters" (1982:122). The script that parents use is the unconscious and conscious results of their own childhoods

and later influences -- books, models, theories. Consequently, each child grows up speaking a "mother tongue", a member of the parent's culture, but individually shaped in relation to that parent as distinct from all other members and speakers, even familial cohorts. The process by which this is accomplished is incompletely understood; but the key we feel lies in the dyadic unit mentioned earlier, not in any simple teaching or training.

As an aside: when researchers looked at mothers' language to their children, they found differences between what mothers and children say. Researchers concluded, then, that mothers could not be teaching their children how to speak and were not necessary for language to develop. This is, of course, only true if one assumes a notion of language learning as training. Mothers may be doing something else, however, which supports language development in a less obvious way. Jerry Bruner has written eloquently on this topic and perhaps will speak more about this in his presentation.

As a result of taking the mother-child dyad as our unit of observation and analysis, a major direction of the 1980's focuses on interaction research: mother-child, child-child, and teacher-child interactions. The social origins of psychological phenomena emphasized by Vygotsky, have been picked up by many other theorists as theme and variations for the 1980's. Two questions arise from these new studies, however. The first: How to observe interactions without simply being additive. That is, to a list of descriptions of the child, too often we merely add adult or other descriptors and call the sum of these, interaction. The second question is: How to analyze the learning process taking place in the interaction without slipping back into neobehaviorist conditioning and contingency patterns, where one member of the dyad trains the other.

The challenge for the 1980's, then as I see it, is to redefine "social" beyond just the notion of child-plus-other. Perhaps taking a systems perspective will help us here, seeing the child composed of subsystems, him/herself a subsystem with others. In open systems, as we know, information flows between parts and whole; and parts and wholes are

constantly redefined depending upon where one places a boundary or frame at any given time of observation and for any given reason. Thus, the whole may be now the child but another time the mother and child dyad, or even a larger context of which the dyad is a subsystem. We may even be able to get away from "imwelt" and "umwelt" -- inner and outer -- altogether.

Certainly, new attempts to reexamine contexts seem one of the most promising new directions. Words like scripts, strips, scenes, episodes, frames and formats are heard more often these days and these are all attempts to open up the boundaries of what we study as we understand that the child is but a small part of larger systems. We see context, not as static and given background -- the matrix into which what we are studying is embedded -- but as actively constructed by participants. Development describes how children become equal participants in systems to which they are originally only a symbiont or "apprenticed" (Kaye, 1982). In these apprenticeships, parents use their theories about children to engage them in activities as if the children were participants. For example: mothers treat anything young children say as a turn in conversational dialogues. Parents hold children up and move them forward as if walking. Ultimately, in a complex interplay of genetic predisposition and contextual activities, children become talkers and walkers.

We, as adults, become so adept at constructing and controlling contexts that we imagine these abilities as context-free. We talk about them as "cognitive structures" or "language competence" or "psychic structure", which we reify as entities and make the goals of development. Children are expected to perform relative to these competences or are judged accordingly. Contexts have been seen as but means to these ends. We are used to saying, for example, that a major advancement in language acquisition is the de-contextualization of language from the concrete situations in which it transpires. In cognitive development as well we speak of the child's progression to formal operational intelligence as a freedom from the actions, perceptions and concrete materials of

preceding stages. Psychologically, we talk of the individual, separate and free from symbiosis.

Nevertheless, the dominance of competence over performance, of structure over function, of context-free over context-dependent, is beginning to wane. Jerry Bruner has captured the shift of this new direction very well when he says: "The classical approach to the explanation of continuity was to say that with increasing mastery, the child's language moved from being highly dependent on its context of use to being, somehow, less and less context dependent. It is a view that is harder and harder to live with. At most we can say that adult language is context dependent in a different way than child language" (1983 MS:11). And we can add: formal operational children are context-dependent differently from preoperational children...and so forth.

Once again, I fear, we have been tricked by our own perceptions -- which places us as theorists somewhere in the preoperational stage of development. Just as the separateness of the individual and increasing autonomy should not delude us into thinking that the individual alone is our unit of study, so too we should not be deluded into believing in the disappearance of contexts. I am reminded of Vygotsky's comment on the apparent disappearance of egocentric speech -- speech for oneself -- seemingly replaced by speech for others. Vygotsky notes: "To interpret the sinking coefficient of egocentric speech as a sign that this kind of speech is dying out is like saying that the child stops counting when he ceases to use his fingers and starts adding in his head. In reality, behind the symptoms of dissolution lies a <u>progressive</u> development"...a transformation of the phenomena into a new and more abstract form." (1962:135).

It is to the transformations of early dyadic relationships and early contexts which constitute those relationships that our efforts must turn. These do not disappear but are transformed into the presuppositions for ever new development. It is the context, of course, which continues; not some abstract entity like structures which continues in context or in spite of context. Contexts which are created today become the shared

realities which continue tomorrow. The construction of reality is not a solipsistic activity; it is a shared, cooperative activity.

As a concrete example, we may say that what has happened at home becomes the presuppositions the child brings to school (and ultimately, vice versa). For some children more than others, the given and the new match -- home and school. To find the cause of mismatch, we should look not to deficits in child competencies, to failures of parents or environment, but to differences in previous interactions. And I suspect James Comer will have more to say on this topic in his presentation. Recent cross-cultural studies by Michael Cole and his associates which examine variations in context-building are most helpful here, and give us insights into children within our own culture with learning problems.

Our search for a better understanding of the complexity of childhood is informed by people from many different fields and professions. For example: one of our more provocative sources for future studies of contexts is the work of Gregory Bateson whose ideas of frame and boundary were derived from anthropological and ethological research. Bateson's work on play and fantasy illuminates the important role of play for children in creating and controlling contexts. We look also to anthropologists like Clifford Geertz, philosophers like Jurgen Habermas, sociologists like Erving Goffman, psychologists like Ragnar Rommetveit -- ethnographers, psychoanalysts, psychiatrists and teachers, too numerous to mention.

Commenting on the new directions in science, evolutionary biologist Stephen Jay Gould has said: "The watchwords of this new way are 'holism' and 'ecology'. We must recognize <u>inseparable union</u> and <u>interaction</u> as basic realities " (NYRB xxx3, 3/3/83:23-25). This new approach to science infuses our work as well and it is gratifying to find that child develoment is in step with changes elsewhere in science. But we must also face the attendant challenges.

I have already mentioned the methodological challenges. We must find new ways of describing and analyzing these "inseparable unions" and "interactions". In pursuit of methodologies, we must learn to domesticate the new technologies of videotape and computer, resisting the temptation to make these instruments into methods, or ends in and of themselves.

Gould raises another challenge, that of explanation. He states: "Complex systems, not separate building blocks, must be our units of explanation...The antireductionist model tries to understand nature as a hierarchy of interdependent levels, each coherent in itself, but each linked by ties of feedback to adjacent levels...no level is an ultimate reality and reference point for extrapolation; all are legitimate, interfacing aspects of our natural world" (NYRB, xxx3, 3/3/83:23-25).

The message is clear -- integration without reductionism: on the one hand, we cannot reduce psychology to biology or cognition to neurology; on the other hand, our developmental theories can be enriched by findings fedback from other levels, and we must seek these "ties" and "interfacing aspects".

I will mention only two examples from other levels which raise interesting issues for me. (I will use neurology and biology since I used such examples earlier.)

(1) Evidence from neurology suggests multiple and independent registration of experiences in both hemispheres of the brain, with coordination occurring only later in development. Immediate questions arise on how to adapt instruction during the preschool period to enable learning in both verbal and nonverbal modalities. What does it mean in terms of memory and reading or writing which combine both visual and verbal symbols; what should we expect in behaviors? On a theoretical level, should we seek the same or even parallel theories of development for language and other forms of behavior or are these initially independent?

The redundancy of multiple coding is evident not only in neurology but in biology as well, e.g., the genetic material of chromosomes. Yet developmental theories continue to pursue a simple linear causality in their explanations, often interpreting correlations as causalities. Should we look instead to principles which incorporate redundancy, such as multideterminism, overdeterminism, multi- or equifinality, more appropriate than linear causality to open systems.

Redundancy assures outcome -- about 50% of language, for example, is redundant and insures my message is transmitted in spite of noise or interference. Redundancy also insures change: the greater the redundancy, the more room for adaptation. Shouldn't something so important to the future of the species as our lengthy human childhood be infused with a high degree of redundancy?

(2) My second example comes from biology: Controversies in evolutionary biology pose alternate theories of change: one by gradual increments, another by "punctuated evolution" according to selective pressures. Should we expect cognitive and psychosocial development to be continuous, smooth and gradual, or discontinous, as Jerry Kagan suggests, marked by eruptions of new abilities?

A word of caution is in order. We must beware using our new theories to create new family romances of perfect adaptation and adjustment resulting from a fairy tale version of mother-child interaction, where perfect reciprocity, mirroring, scaffolding, or whatever, is the only road to healthy development. Such fictions not only distort reality but are a heavy and guilty burden for adults to bear. Studies of children from different cultures and backgrounds, and case studies from psychopathology, teach us how rich are the varieties of interaction, and how adaptive to survival. Although often resistant to change, humans have capacities for change - and therefore for development -

unprecedented in evolution because they are not constrained by biological principles alone. The geneticist Medar has noted that, while physical development follows Darwin's principle of natural selection, culture follows those of Lamarck: the former takes long periods of time, the latter may be accomplished in one generation through the transmission of information.

The transmission of acquired knowledge not only permits the passing along from one generation to another of pathological behaviors, only too familiar to us -- poor parenting, underachievement, teenage pregnancy, alcoholism, drug abuse, child abuse -- but also allows the interruption of these cycles with appropriate intervention measures: therapy, day care and schooling, parent-modeling and parent-support groups, foster parent and adoption programs, and many more.

In our search for a synthesis we must guard against premature closure and the simple solution. Some recent, familiar examples:

* It's all genetic -- There's nothing we can do; it's all in the gene, at least until the merger of evolution and development made possible by recombinant genetics (the so-called brave new world of "designer genes").
* It's all environmental -- There's nothing we <u>can't</u> change (B. F. Skinner's Brave New World).
* It's all neurological -- There has to be a physical trace and that's all that's interesting ("Brain events").
* It's all chemical -- We can "cure" behavior with a pill.
* It's all in early imprinting or bonding -- One moment makes or breaks future development.

These simple solutions do not offer a synthesis, but rather a return to old, failed dichotomies. Fortunately, the human child is much too complex for simple solutions. This means there is still much to discover, if like children we retain our capacity for curiosity and openness to possibilities.

In the workshops, panels and lectures of the next two days you will be participating with people who have remained curious about children and families. If I told you they had answers to the questions I have raised, you would be rightly skeptical; and they would be rightly furious, having to bear such an onus. They are, instead, people who are asking interesting questions and I hope the context provided by this conference will be transformed through your work and continue into the future.

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"Development of a Transactional Self"

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I. Introduction

A. Object of the exercise.

I have spent the last decade studying the manner in which kids acquire the uses of language and, before that, studying the early cognitive development of infants and young children. The experience and the results lead me to the conviction that our account of development is lacking in one crucial dimension, "our" meaning the usual general version of development. I think we have been getting it very wrong about the nature of the "executive routines" or "programs" by which growth is shaped and steered. I shall call this general class of processes by its usual commonsense term, Self, and I add to the old term the word transactional in order to underline the central point at issue in my own thinking -- viz., the Self is a body of procedures in terms of which we regulate our relations with others and with the nature of the culture in which we operate from the very start. When I say "procedures" I do not wish to avoid the problem of self-consciousness or of self-reflection and self-repair -- turning around on one's own procedures and putting them in more adequate order. I shall come to that issue later.

In order to make abundantly clear what I have in mind, let me begin with an account of the conventional view that I wish to dissociate myself from. (I would also, before starting, like to acknowledge two intellectual debts. One is to a gifted young anthropologist, Michelle Rosaldo, whose efforts to develop an anthropologically adequate theory of Self, helped inspire my efforts. She was killed two years ago in a landslide in the Philippines while studying the Ilongot people there, but left a seminal book and several papers that have inspired some of the points I want to make in the course of my remarks. The other debt is to a young Oxford

philosopher, Gareth Evans, who also died in his thirties, also very recently, who approached the problem from the point of view of the linguistic theory of reference and reached some startling conclusions about the operation of Self that are congruent with Rosaldo's and that have also influenced what I want to recount.)

B. Some conventional shibboleths about Self that I shall present with a view to rejecting them later. But I shall try to present them fairly.

1. Egocentrism. That initially, young human beings are egocentric, incapable of taking the perspective of others, have no conception of Other Minds, and must be brought to sociality or allocentrism through development and learning. In its baldest form, it is the doctrine of initial autism that even held the view that the first perceptions of the child were little more than hallucinatory wish fulfillments. It is a view inspired principally, I think, by the doctrine of original sin.

2. Privacy. That there is some inherently individual, biological Self that develops and that is given in the universal nature of the human mind, that is itself universal and beyond culture. It is a matter that is caught in such distinctions as Self vs. Persona (the presentation of Self), Guilt vs. Shame, Deception vs. Disclosure, etc. It emphasizes a kind of ineffable individuality and puts the locus of central control of the person there.

3. Unmediated conceptualism. That the child's growing knowledge of the world is achieved principally by direct encounters with that world rather than mediated through vicarious encounters with it in interacting and negotiating with others. In this regard Piaget, stimulus-response learning theory, and information-processing theory all occupy a common bed. It is the doctrine of the solo child.

4. Tripartism. That cognition, affect, and action can be usefully separated -- that they stem from different origins and are often in conflict that needs regulation through socialization.

5. Promissory note. I want to show that all of these premises are not so much "wrong" as arbitrary and that their acceptance prevents the development of a workable idea of the Self. To give you a taste of my argument, let me propose, for example, that the distinction between "private self" and "public self" is a function of the culture's conventions about when one talks and negotiates the meanings of events and when one keeps silent, and upon the values placed upon and the ontological status given to that which is kept silent and that which is made public. Cultures and subcultures differ in this latter regard, and so even do different family constellations.

II. Relation of my theme to "stability and change"

Bonnie Litowitz told me to concentrate on sources of stability and change within development -- a good year ago. The binary opposition of genetics as providing stability and environment as producing change was the shiboleth that she hoped we would all attack. Gladly. For I would like to argue that it is in the nature of the development of Self that it becomes possible to maintain continuity in development while providing the basis for change.

Indeed, Self is a process that makes possible the assimilation of change by making it assimilable to a canonical "story line" -- what I shall later refer to as "syntagmatic continuity." You will recognize it in such maxims as the French, Plus ca change, plus la meme chose. But more of such "stories" later.

III. Self from the vantage point of language

A. Three accomplishments of language.

1. Order and syntax. We need not pause long here. The main point that needs making is that the possession of (or the acquisition of) language gives us rules and a criterion by which we can generate well-formed utterances -- whether they reflect the structure of an organ of mind in general or of some organ of language as such, or whether there are aspects of learning involved. That is not our concern. The point, rather, is that grammar permits us to use a highly abstract system for accomplishing communicative functions that are crucial for regulating joint attention and joint action, for creating topics and commenting upon them in a fashion that segments "reality," for forefronting and imposing perspectives on events, for indicating our stance toward the world to which we refer and toward our interlocutors, for treating and marking presuppositions, for marking the temporal structure of events through aspect and of time through tense, and doing myriad other things that make it possible for a user of language to relate himself as agent to others in the world around him and to the culture. For what I have to say, the orgins of syntax can be left unexplored, save to note that whatever the orgins, the

resulting system vibrates with potential usefulness not simply for representing the world, but for getting things done in that world. It is also a system that is extraordinarily sensitive to shaping by cultural context, as we shall see in a moment.

2. Reference, sense, and constitutiveness. Language has the property of referring, and it does so by an extraordinary use of context. It refers to objects, events, and far more abstract entities in a manner which is traditionally referred to as deictic. Deixis is dependence upon a constructed and presupposed context that two speakers must share if they are to succeed in communicating -- like the classic shifters I and You, with me using the first when referring to myself and the second when referring to you but appreciating that you shift to I when you refer to you and You when you refer to me. It is to the credit of Gareth Evans that he recognized the profound extent to which referring involves the mapping of egocentric spheres on each other, and how complex the procedures are for doing so. He reminds us, for example, of the interesting anomaly that a failed effort to refer is not just a failure, but rather that it is an offer, a promissory note about an intent, an invitation to search possible contexts, etc. As such, referring to something requires even at the simplest some form of negotiation or some hermeneutic process. If it were not so, reference to merely possible events would be so difficult as to fail often. Referring to something singles out a locus to be explored in a certain way. Achieving joint reference is achieving a kind of union or solidarity with somebody.

   Sense -- it was Frege who made us first aware of the separability of sense and reference -- has to do with the relation of words or

expressions to other words or expressions or representation of the world. Sense and reference together constitute meaning. And there is the rub. What shall we take as meaning? The stipulative formal meanings of the dictionary? Not really, for there are meanings that grow out of particular settings and occasions. "That's a pretty weak excuse," we say, and the utterance requires a deep construal to dig out its occasion meaning (in contrast to its timeless meaning, if there ever is such a thing as a truly timeless meaning). Dictionary meanings are public in a static sense -- public but non-negotiable. Occasion meanings are made public and conventional in concrete cultural contexts. They help form Self, as I shall try to show in a moment. So we may say, given the negotiability to meaning and reference, that the formation of Self depends powerfully on the meanings that a human being shares with others of many stripes, first in time among which will be his family of origin, of course.

Constitutiveness concerns the capacity of language, used in a certain way, to create realities of its own. I am not referring to the Whorfian claim that language shapes concepts about the world -- which it doubtless does in varyingly subtle ways. Rather, I am referring to the power of language to create social realities altogether -- one conspicious case being what John Austin two decades ago called commissives, as when I say, "I promise that X" and create a reality of such density that failure to conform to it may lead me in something as realistically substantial as a jail. We create realities by warning, by encouraging, by dubbing with titles, by conferring degrees, by offering explanations, etc. Constitutive realities are shared. They become public. They are one of the means

whereby, once we speak, we turn Silent Self into Transactional Self. I shall come back to this matter later in more detail.

3. Pragmatic functionally. Human utterances must not only be well formed, refer, make sense, and constitute or stipulate, but they must do so in such a way as to bring off results in the world of interaction. I have been at pains thus far to make it clear how the syntactic and semantic processes of language use help further this end. But now I must say a few things about the pragmatics of language in a more direct way. The central concept to which I want to make reference here is the speech act which, I am sure, is familiar to most of you. A speech act, in brief, is a means of making one's intentions clear and conventional by the use of language.

   Any utterance consists of a locution whose surface structure needs to be construed not simply for what it says but for what the speaker intends. The classic and by now boring standard example is the utterance, "Would you be so kind as to pass the salt," which at the surface is a request for information about an interlocuter's limits of compassion. Only a linguistic idiot would interpret it in that way -- an idiot who understood only syntax and semantics. In addition, one needs to be able to penetrate to the illocutionary or performative force of the utterance. To use the current jargon, getting to the intent of the utterance is "uptake." Intentions can include a wide, wide variety of things: indicating, requesting, promising, encouraging, threatening, etc.

   Knowing how to make one's intentions clear and conventional (and knowing how to interpret the language-encoded intentions of others) requires a sense of the appropriateness of language use in different

kinds of situations. Such knowledge is usually described as knowing the felicity conditions for making utterances. There are usually three such conditions stated, to which I shall add a fourth.

Preparatory conditions. If you are going to request or threaten or whatever, you prepare the ground to fulfill a proper reasonableness. "I've had enough of your discourtesy. Once more and I'll punch you in the nose." Or, "I've never seen anything like it. Look at that."

Essential conditions. If you are going to request, for example, you should be without that which is requested. If you are going to promise, you should have the wherewithal to deliver. If you think these conditions are easily grasped by children coming into the linguistic culture, I recommend my forthcoming book (Child's Talk) where you will find abundant instances to the contrary.

Sincerity conditions. If you request something, you must really want it; if you promise, you must intend to fulfill. To deliberately transgress sincerity conditions is to be a con man, a fraud, a manipulator, a practical joker. To lie or to dissimulate with intent to deceive is distinctly human and its forms are carefully graded from hype and used-car salesmanship to downright criminal fraud. Sincerity conditions, properly managed, provide an extraordinary scaffold for the construction of Self. For here is the place where decisions about silence, indirection, manipulativeness, and the like are made.

Affiliative conditions. In forming our locutions in a manner to carry illocutionary force, we must take into account the social relationship that exists between us and our interlocutor -- hence the "would-you-be-so-kind" form, honoring the voluntary status of a requestee. In the

very act of speaking, then, we relate ourselves to the world of others and to the culture that we share with them.

B. Culture and language.

You will readily appreciate, then, that learning how to use language involves both learning the culture and learning how to take stances that are "personal." You become a member of the culture and you become your own Self. I want to say a word about each of these.

1. Learning the "culture."

As you no doubt know, there has been a profound revolution in the last decade in the definition of human culture. It takes the form of a move away from the strict structuralism that held that culture was a set of interconnected rules from which one derived particular behaviors, to the idea of culture as implicit and only semi-connected knowledge of the world from which, through negotiation, we arrive at satisfactory ways of acting in given contexts. The anthropologist Clifford Geertz likens the process to interpreting an ambiguous text. Let me quote a paragraph from the last paper written by Michelle Rosaldo that puts it exceptionally well:

> In anthropology, I would suggest, the key development ... is a view of culture probably best articulated in the works of Clifford Geertz, wherein meaning is proclaimed a public fact -- or better yet, where culture and meaning are described as processes of interpretive apprehension by individuals of symbolic models. These models are both 'of' the world in which we live and 'for' the organization of activities, responses, perceptions and experiences by the conscious self. For present purposes, what is important here is first of all the claim that meaning is a fact of public life, and secondly, that cultural patterns -- social facts -- provide the template for all human action, growth and

> understanding. Culture so construed is, furthermore, a matter less of artifacts and propositions, rules, schematic programs, or beliefs, than of associative chains and images that tell what can be reasonably linked up with what; we come to know it through collective stories that suggest the nature of coherence, probability and sense within the actor's world. Culture is, then, always richer than the traits recorded in the ethnographer's accounts (In Press).

It goes without saying almost, that the process of establishing occasion meanings and of making known our intentions by conventional means so as to meet felicity conditions -- that both of these are typically "cultural" as well as linguistic. How we decide to enter into transactions with others linguistically and by other exchanges, how much we wish to do so (in contrast to remaining "detached" or "silent" or otherwise "private") will shape the sense of Self that we form. As Rosaldo reminds us (using her Ilongot people as contrast) our Western concern with "individuals and with their inner hidden selves may well be feature of our world of action and belief -- itself to be explained and not assumed as the foundation of cross-cultural study." Indeed, the image that we provide for guidance to speakers with respect to when they may speak and what they may say in what situations may indeed be a first constraining definition of what constitutes "public Person" and what constitutes "private Self."

Let me illustrate with an old story about the philosopher Morris Raphael Cohen who, one day, encountered a patently disturbed student outside his door looking for the Psychological Clinic and, upon asking him what was wrong, was told by the student that he was full of doubts about who he was. "Who am I?" the young man asked plaintively. Cohen is reputed to have replied, "And who's asking the question?".

2. Reevaluating presuppositions about growth.

In light of the foregoing, we need to examine those classic chestnuts about the nature of early endowment and of the directions of growth. Let me use the same headings as I did before in describing them.

a. Egocentrism. I lost faith in the organizing power of the idea when Michael Scaife and I discovered that by the last quarter of the first year of life, normal children habitually followed another's line of regard to see what they were looking at. There must, moreover, be some insight into the nature of other minds, for when the child can find no target out along the line of regard, he turns back to the looker to check the gaze direction again. Or, to put it in Katherine Nelson's terms, when the child understands the event structure and the scenario is familiar, he is not that different from an adult. He simply does not have as grand a collection of scripts and scenarios and event schemas as adults do. Moreover, the child's mastery of linguistic deictic shifters suggests that egocentrism is not the problem. When the child fails to grasp the structure of events, then he adopts an egocentric framework. It is, as we say in linguistics, not a competence problem but a performance failing.

b. Privacy. As we have seen, the notion of the "private" or reserved Self free of cultural definition is part of the stance inherent in Western man's conception of himself. The nature of the "untold" and the "untellable" and our attitudes toward it is deeply cultural in character. Private impulses are defined as such by the culture. Obviously, the shift of meaning from hidden to overtly told makes a great difference to our personal dynamics, else there would not be such heavy emphasis upon either psychoanalysis or Catholic confession in our culture. At

least one critic, Foucault, has already made this point about the centrality of confession in our great literature. It constitutes entry into negotiation.

c. Unmediated conceptualism. In the main, we do not construct a reality on the basis of private encounters with exemplars of natural states. Most of our approach to the world is mediated through negotiation with others. It is this truth that gives such extraordinary force to Vygotsky's theory of the Zone of Proximal Development in which growth is assumed to occur, so to speak, by the child being bootstrapped by a loan of adult consciousness on which he can climb to higher ground. We know far too little about learning from vicarious experience, from interaction, from media, even from tutors. It involves the kind of transaction that is central to selfhood: Who, so to speak, helped us across the Zone of Proximal Development? Who lent us their consciousness until we were able to develop our own -- and made us sensitive to their style as well as their contents?

d. Tripartism. In psychology (perhaps beginning with Aristotle) we have insisted in abstracting cognition, affect, and action (i.e., motivated behavior). I hope that the account that I have tried to set forth both concerning the acquisition of language and the acquisition of culture underlines the poverty that results from making that distinction too firm and fixed. That superb psychologist, David Krech, used to urge that people "perfink" -- perceive, feel, and think at once. I would not want to add to this and say he had it almost to "perfinktion" and all that was needed was action. We can abstract each of these functions from the unified whole, but if we do so too rigidly we lose sight of the fact that it is one of the functions of a culture to keep them related and

together in those images, stories, and the like by which our experience is given coherence and cultural relevance. The scripts and stories and "loose associative chains" that Michelle Rosaldo spoke of are models ("templates" she liked to call them) for canonical ways of fusing the three into self-directing patterns -- ways of being a Self.

IV. Some very minimal conclusions.

A. As a starter, I think the process of self-formation along the lines I have outlined is a crucial form of individual stability, but it is a stability that is premised on the stability of a larger scale unit -- the culture. It will always be difficult to change any human being's sense of Self without somehow moving him from the support and constraint system in which he operates and with which he negotiates.

B. The power of healing ceremonies, talking therapies, encounter groups, and all other such joint systems is that they provide an opportunity for "turning around on oneself" and recognizing better the nature of the constraints that operate and, by negotiation, to test other ways of interpreting one's acts and one's communications. Emphasis on metacognition, everywhere so evident in psychology today, probably spells the beginnings of a culture change in the direction of a better appreciation of how Self is formed and maintained -- and how changed through Self-awareness.

C. Meaning, as Geertz insists, is public and when rendered so by negotiation, its effect is powerful in the sense of creating an existence therein about a way of being. The idea of a Transactional Self is essentially a means of underlining the importance of cultivating negotiation as a medium of reformulating Self and reexamining the cultural constraints that make it.

D. Looked at from the perspective of communication, one can conclude by saying that it is not altogether false that we are some combination of what we say and what we choose to keep silent, each informing the other. This gives the canons of language use, pragmatics, an enormously powerful role in the forming of personality. And having said that I fall silent.

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"Children and Social Networks"

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Thank you very much, Dr. Love; thank you, ladies and gentlemen.

It's a very great pleasure and honor to be introduced by Dr. Love. I first met her when she was directing the "Right to Read Program", and I have followed her work in Oakland and Chicago, work which is characterized by intelligence, innovation and, I will also add, great common sense and no nonsense. So, again, it is a great honor to be introduced by Dr. Love.

I have been interested in the work at the Erikson Institute for some time, so it is an honor to present the Edith Neisser Lecture for the Institute. I did not know Mrs. Neisser, but I have learned that her work very much parallels my own interest.

Also, it's delightful to be here in Chicago, one, because I have many colleagues and friends here. But also, as you heard, I grew up near the Lake, and it's home. It's also an opportunity to visit with my daughter, who is a freshman at Northwestern.

The theme that you have chosen for this particular conference, "New Directions in Studying Children," is an important one. I have been concerned that social and behavioral scientists have put so much emphasis on the individual at the expense of looking at the individual and his family in the context of community. There has been too little study of the life and development of children in their social networks beyond the family, and the skills and interactions needed to function adequately in those social networks. And so, one of the new directions that I feel is necessary is that we give adequate emphasis to, and begin to try and understand, the impact of these social networks on child development and the behavior of children within them.

My approach this evening will be to review, very briefly, what children are expected to know and be able to do as adults and then consider the critical developmental tasks which they must engage in and go through to be able to achieve those goals or meet those expectations. Then we shall consider the institutions of social networks in which development occurs as they operated yesterday, or in the pre-1940's period, and as they operate today in the post-1940's period. I will use my personal and

research experience in the family and my work in schools as a way of pointing out the importance of looking beyond the individual and the family for the cause of particular behaviors on the part of young people, and to look at the development of young people beyond the family. Finally, I will suggest what we need to do and where we need to move as students of child development and child behavior.

First, let me talk about some of the developmental tasks that are important and some of the things that children should be able to do and are expected to do. We expect young people to be able to work and/or follow careers. We expect them to be able to live successfully in families. As adults, we expect them to be good child-rearers themselves. We expect them to be responsible citizens. And we expect them to be able to express themselves appropriately and find gratification and meaning in life.

Children are not born able to do these things. And the competence that they must acquire to be able to do so does not come by chance. It comes through rearing. Competent rearing will allow children to become competent adults, enabling them to achieve the tasks that we expect of them.

Now, let me talk about the caretaker. Caretaking and the rearing of children is largely the responsibility of parents. We expect parents to be able to move children along developmental pathways. Although there are many pathways, several are critical. First is the social and inter-personal pathway. We expect parents, through interactions with children, to be able to move them from the first social smile through a number of interactions all the way to the point that they have social skills which enable them to operate successfully in today's complex society. Second, we expect them to develop speech and language. As parents and caretakers, we must move babies from the original "dada" and "mama" all the way to adult speech patterns. Thirdly, we expect children to move along the cognitive or thinking, intellectual or academic, pathways so that they eventually have the skills which enable them to think and work in the kind of complex society that we have today; to work, think and manage themselves and become good

problem-solvers. Fourth, we exepct the kind of psychological development which will enable them to handle their emotions and feelings appropriately in a variety of situations. We expect the kind of psychological development which enables them to have adequate control of their impulses. Finally, we expect good moral development so that they can perform as responsible citizens in the society.

Now, let me turn to the social networks in which they must live and work. Those networks must operate in a way that will allow as many parents as possible to move their children along those developmental pathways so that they can perform adequately as adults. I feel that there are three major social networks or concentric circles in which children grow. We ought to understand these networks because they have tremendous impact on the behavior of families and children.

The first social network is that of the family, or the institution of the family. The family is also enmeshed in a network of friends and kin, and I consider this the primary social network in which very important attitudes, values and modes of behavior are established which will begin to move children in specific directions. Next is the secondary social network. This network involves the church, school or whatever organization the family is primarily involved in outside the home and sometimes in the workplace. Finally, there is the tertiary social network, the institutions of the larger society: government, primary economic system, television and other institutions where social policies, ideas, attitudes of the larger society are transmitted to children. The policies that affect the quality of schooling and the quality of home life are all developed in the government and primary economic institutions of the larger society. The decisions made there impact very directly on the lives of children. We have paid too little attention to those decisions and how they impact. Finally, the interaction and identification, or the non-interaction and non-identification, with the leaders within these various social networks influence the development of children and can either shape their behavior positively or lead to harmful and destructive development.

Now let me consider the institutions, as they were yesterday and are today, in which children grow and why today we face a much more difficult situation than in the past. Although life was difficult in the past, it was less complex. It was less complex because we were a nation of small towns and rural areas, and even the cities were collections of small towns right up until the mid-nineteen forties. There was relatively low mobility. It was hard to get from one place to another; thus, people didn't come from outside their communities as often as they do now. Nor did young people leave their communities as much as they do now. And also there was a low level of communication and information coming into the communities.

Parents, teachers, administrators, ministers and many other important authority figures interacted with each other in the past in a way that is not possible now. For example: when I went to the A&P store with my parents as a youngster, I would bump into my school principal, my teachers and a variety of other important authority figures. I would observe my parents talking to them and shaking hands with them. The relationship between my parents and the authority figures in those other institutions was a message about the way I had to respond to those people and the way I had to respond in school. When I was in fifth grade, I used to walk hand in hand to school with my teacher. As a result, there wasn't much chance that I was going to act up in her fifth grade class.

Also, in the past, we worked and we played within small distances of where we lived. All of the information we received as children was from important, familiar authority figures -- parents, teachers, administrators, the policeman on the corner, the neighbor down the street. And all of those authority figures spoke with a "common tongue" about what was right, wrong, good, bad. If you asked one, you might as well have asked them all because they all said the same thing. Now it is true that there was abuse of authority and people suffered: minorities suffered, women suffered and poor people suffered.

On the other hand, that kind of social system and social network created clear expectations, a predictable environment. You knew what would happen if you did certain things and it limited the possibility of acting up in unacceptable ways. It was much more difficult to snatch the purse of an elderly lady that you saw walking down the street in that kind of social network because she was much more likely to be related to someone who was important to you or who knew you. And there was greater acceptance of the authority figures because of the kind of security they provided and that that kind of social network provided. There was a greater sense of belonging on the part of everybody, even if it was belonging in your own place or space. As a result a natural sense of community existed in pre-World War II society.

The school was a natural part of that community because of the kinds of interactions that I have just described, and the authority that parents had with their children was transferred very directly to school people who could exercise authority in their classrooms very readily. At the same time, there was a very low level of social and psychological development needed for people to be able to function, to earn a living and to be able to take care of themselves and their families, and to be able to feel good about themselves <u>because</u> they were able to take care of themselves and their family. As a result of that self-esteem and feeling good about themselves, children could identify with the leaders of society and were much more likely to perform as good citizens. They were much less likely to be alienated and distrustful of authority figures. Even then, with that kind of social system, even where resources for fostering child development were marginal or inadequate, children were much more likely to come in contact with people who could support and aid their development without some of the problems that exist today. Even with all of that, if young people failed in school, they could leave school, take a job and still earn a living; they could take care of themselves and feel good because they were able to do so.

After World War II, society began to change very, very dramatically. We are still living today with the effects of problems we did not respond to earlier. We moved from a society of small towns in rural areas to a metropolitan society. There was a higher level of communication after World War II, with greater mobility. Television came into everybody's home, and automobiles and suburban sprawl separated people by income and racial groups. People became isolated; and groups became isolated. There was increased distrust and there was increased disrespect between the authority figures at home and at school and in a variety of other social networks. Teachers and authority figures very often came from long distances outside the community into the schools, and they were not, then, members of the primary or the secondary social networks. There was not the same sense of community. Also, authority figures were no longer the holders of all truth, because they had competition from television and a variety of other sources of information. After World War II, children could see, almost immediately, different attitudes, values and modes of behavior from around the world. They could see it every half-hour over television, and often these approaches and ideas were different from those that their parents were trying to teach them. Awareness of differences of opinion undermined the automatic acceptance of authority on the part of many children. The increased distance that children had from authority figures increased distrust. Now the problem remains, as it always has, that children today are no more mature than children ever were. In fact, today's children need much more contact with knowledgeable, trustworthy and meaningful adults than ever before. Children need to be able to trust adults who can help them deal with the increased information they receive, integrate that information, and learn how to respond appropriately to be able to manange their lives adequately. And yet what they have are really fewer and less trusting relationships with adult authority figures than I had when I was growing up only a few years ago. Let me emphasize this point.

The school is no longer a natural part of the community but, rather, often an alien territory. Today children and people work and play many miles from where they live. So people and children today are very often on their own much more than in the past. There is much less sense of community. There is less of a sense of belonging. There is less of a sense of security as a result of that. At the same time, in order to hold a job, and to carry out all those functions that I indicated, children need to be able to develop skills. We need the highest level of development -- perhaps the highest level ever needed before in the history of the world -- across those critical developmental lines that I talked about earlier in order for children to be able to meet their adult responsibilities in an extremely complex and difficult society.

Now let me talk a bit about what social networks could have done, should have done, and still must do. Society should have invested more in the tertiary social network of business and of government; society should have invested much more heavily and carefully in the development of all children, not just poor and minority children, but all children, because there are serious developmental issues for children of all backgrounds. We should have invested more in support of families, preschools, school programs and other institutions that are important in shaping children's development. We should have attended to other social network systems that impact on the lives of families and children. Instead we left development to chance. We left it up to individual parents regardless of their circumstances and regardless of their stresses. And, as we would expect, the most powerless families and the most powerless communities received less in the way of support, and many of those families were overwhelmed. The result is that child-rearing in many families in this country is in trouble at this very moment. The management of many schools in this country -- not only urban schools but suburban and rural schools -- is also floundering and inadequate. The management and child-rearing approaches that worked in 1900, worked even until the mid forties, do not work today and did not work even in the 1950's. So let me turn for a moment to the question of child-

rearing and families and talk about what has been, can be, and should be done, in my opinion.

Before the 1940's, child-rearing was really quite authoritarian and continues, in my opinion, to be too much so even today. We thought of ourselves as the owners of our children. We could tell our children what to do. Using external control, we could make them do things. We did not promote internal control adequately under this approach. I will give you just one little vignette, a story I heard yesterday about a superintendent of schools who used the extreme authoritarian approach. He walked into an inner city school, shook his finger in the face of a youngster who had his hat on and said, "Take that hat off." The youngster used an expletive, telling him were he could go and what he could do with himself. The superintendent was outraged and said, "Do you know who I am?" and the youngster, using another expletive, told him it did not matter. So the superintendent suspended the youngster, and that did not matter either. Thus, all you had in this incident was a challenge and a fight, and no growth on the part of that youngster. That is where the authoritarian approach to child-rearing very often gets today (and I have not touched on other problems with this approach). In the 1950's and right into the 1970's, however, as a reaction to the authoritarian approach, another problem emerged: people became permissive to various degrees and thought of themselves as the servants of their children. Whatever children wanted to do, we facilitated; we understood; we let them do it. "Expression" was supposed to be good for them, or something like that. At any rate, that was an equally harmful approach.

It seems to me that a notion and way of rearing children is emerging -- even, perhaps, had always existed to some extent. In this approach we think of ourselves as the "developers" of our children. The central idea is that children are born dependent with a few skills. We have to carry them and to help them develop across developmental pathways that I described earlier. Now I am not going to give an academic or theoretical discussion to describe what I mean. Instead I am going to offer by way of illustration the

way that I work with my own children. These examples might suggest ways we can help children to develop: inner control and self-direction; motivation for achievement; a sense of personal responsibility needed to be effective; and the skills necessary to function well in today's complex world. (I have already talked with my daughter about whether she would allow me to do this. She assists me in my work, so she has permitted me to give these examples.) When my daughter was about two years of age and it was bedtime, she didn't want to go to bed. She walked over to the stairs and popped down on the third stair, crossed her arms and said, "If you make me go to bed, I will jump down and break my arm." She looked at me with that little smug smile that said 'I've got you now.' I thought for a while and then I said: "Well, you know, if you do that Dad will be very upset. But I will take you to the doctor and I will take care of you. But you know what," and I pointed to her arm, "it will be your pain." She looked down at the arm, and she looked down at the hard slate floor and she got up and went to bed. She thought of the consequences of the behavior and she took personal control of the situation. She weighed a few pounds at that time and it would have been very easy to take her up, put her in the bed and make her go to sleep. But then she would fight back as children fight back: she would call for milk; then she would call for water; then she would call to go to the toilet. By that time I would be furious. We would have a fight, there would be a struggle, and nothing would have been accomplished. By pointing out the consequences of her behavior, however, I allowed her to take charge. In my opinion, this is an example of starting from the very beginning, to help children see the consequences of their behavior, and to encourage personal control, self-direction and motivation. Again when my daughter was about two years of age, my wife and I left the room and there was a chocolate cake on the counter. Nobody else was in the house. When we came back the icing had been licked off the chocolate cake. We asked the question that Bill Cosby calls the "dumb" question. We said, "Who licked the icing off the cake?" She thought for a bit and answered, "I don't know." We continued to present the evidence as if it were an FBI

inquiry. Knowing she was bad, she said, "Somebody came in from outdoors, and they licked it off and went back out." Well, the point is that we knew she had licked the icing off the cake. She knew she had licked the icing off the cake. We really should have pointed out to her that she had licked the icing off the cake but next time we wanted her to ask us for a piece of cake instead. This vignette illustrates two points: the desire of children is greater than their control; and children are not born knowing the rules of the game. By providing information rather than trying to accuse and punish we would have helped her grow and develop personal control, and the skills necessary to handle a variety of situations.

When our son was eight years of age, he had the same problem with bedtime. As a matter of fact, he was staying up very late, watching television shows. It is ironic that he just started his first job Monday with 20th Century Fox in cinema. But at that time his interest in television and film was a problem causing him to stay up late watching television. Because he was missing the school bus and was tired the next day, we said to him, "What time do you have to go to bed in order to get up and make the school bus and be fresh in school tomorrow?" So as not to leave the question wide open, lest he say one o'clock or three o'clock, we added, "Is it seven-thirty, eight or eight-thirty?" Very often when children are brought into decision-making and given an option, they will make a reasonable decision. And he did. Had he said "one o'clock in the morning," we would have said "You're not being responsible, and therefore we will make the decision, but we expect you to be more responsible next time." In this process he was being asked to think about the consequences of staying up late. He learned to plan his schedule and activities so that he could meet his responsibilities. A variety of other things such as self-direction, motivation and self-responsibility were also gained in that interaction. These are important in terms of becoming a person who can control himself.

Another time when my son was eight years of age he asked me, "What will you give me if I make all A's?" I thought for a minute and I said, "Wait a minute, you're not going

to school for me. You're going to school for yourself. If you do not do well in school, your teachers will not wonder about me, they will wonder about you. Your friends will not wonder about me, they will wonder about you. And you will not wonder about me, you will wonder about yourself." From that day to this day, with both of my children, and not just for the reasons I have described alone, I have never had to talk to them about motivation for achievement. As a matter of fact I have to talk to them about not working so hard sometimes, because achieving and control and developing self-control, direction and motivation is from within. My belief is that in this day and age, where we cannot follow children, and where there are not people all over town in a variety of places who can help support the development of our children, we have to develop children who have greater internal control of themselves. Yet what we have is a society where the majority of people, even middle and upper income people, still rear their children with an authoritarian approach. The results are extreme amounts of rebellion, acting out and acting up behavior. Because we pay too little attention to interactions within a family, we have many children who do not function well in the home and beyond.

Now, this situation at home creates a problem for school, the social network just beyond the home and friends and kin. School is a very important social network because it is the link between the home and family and the mainstream of society. One of the problems of the school is very much like the problem of the home for many families. The school is still organized and still carries out a management approach that is authoritarian. Principals control the teachers, or attempt to, and often not successfully. Teachers attempt to control the children, again often not successfully, and very often parents are unwanted within the schools and school programs. That approach worked yesterday for all the reasons I have mentioned. It does not work today for many of the same reasons. Consequently, we work very differently in the school program that I am going to describe to you very briefly.

In 1968, our Yale Child Study Center team of five professionals, with me as director of the team, went into two inner city schools. These schools were 99% black, and more than 50% of the children were receiving Aid-for-Dependent-Families. In achievement level, these schools ranked thirty-second and thirty-third our of the thirty-three schools in the city. Children in these schools were nineteen and eighteen months behind in reading and math by the fourth grade. The attendance level and incidence of behavior problems were among the worst in the city. Today, in the school where we remained, the children are at or around grade level, and have been since 1978. In a follow-up study we found that children in the seventh grade last year who went through five years of our program, were two years ahead of their classmates in language arts, and one year ahead in mathematics. Their classmates were from the same community and matched for socio-economic level. This same trend is developing in the test school we have gone into. The attendance has been among the best in the city over the last seven years. Three times in the last five years these schools have been first in attendance, ahead of all the schools in the city with students of a higher socio-economic level, and among the top five in the last seven years. We have not had a serious behavior problem in these schools in over ten years now. We are beginning to move this model to other schools in clusters, throughout the city. What the study demonstrates is that low-income children can perform at grade level and can perform adequately both academically and socially.

In our approach, we start by recognizing that there have been tremendous changes in society. Without equal changes in the organization and management of the school, everyone in the system feels powerless. The principal could not affect the teachers, and the teachers were dissatisfied with the principal. The teachers were dissatisfied with the children; the parents were dissatisfied with the children; teachers, principals and everyone felt powerless. Everyone was in conflict with everyone else. We created a mechanism within the school program that was designed to restore in a very systematic

way the sense of community that existed in a natural way in the pre-nineteen-forties school. What we did was to create a governance and management body directed by the principal, but composed of teachers selected by the teacher group, parents selected by the parents' group, and aides selected by the aides' group. Our mental health team was represented on it as well. The governance and management body meet regularly to identify problems and opportunities in the school, in the areas of psychological climate, academic program, and staff development. As members identified problems and opportunities, they were able to develop resources and implement programs. They monitored those programs, changing and modifying them according to assessments, and gradually over time the school began to turn around.

Our parent program was also extremely important. We operated three different levels of parent programs. The parents worked with the teachers, the administrators, the principal and with our mental health team. Working together, all participants began to develop a sense of ownership of the program. There was consensus again about what was right, wrong, good and bad, how things should be done, and so on. The distrust and alienation between home and school, between people of different income groups, races, education and so on, were decreased because all were working together for a common cause. They developed mutual respect and admiration for each other. The parents were changed from being people who were often antagonistic and angry, alienated from the school, to people who did things in support of the school program. To give one example, we asked parents to assist teachers in the classroom. We started with one parent, and that parent only had to ask two friends to come out and they had a parent group. Having a parent group, they could then begin to do things together in support of the school program. Again, because they felt ownership and a commitment to the school, they would urge parents at a choir rehearsal and in a variety of other community situations to join their parent group. As a result parents turned out for Christmas and other programs. Whereas only fifteeen to thirty parents used to attend these programs, on one

occasion we had four hundred parents turn out at a school that only had three hundred and fifty kids. So, neighbors, friends, and everyone was there.

Our mental health team was involved in trying to change the psychological climate, but we also helped educators and parents understand and think about child development. We helped them think about relationship issues as the program developed in the school. Because there was a good climate and because school became a good place, many behavior problems were reduced. Children were interacting with people from their neighborhood. They saw them in the school, interacting with teachers in a positive way, resulting in reduced behavioral and acting-up problems in the school. The improved climate allowed staff to spend more time on tasks, such as staff development and tailoring to objectives and goals developed by earlier consensus. Therefore, it was a more effective school program in the long run.

In addition to viewing the simple raising of academic scores as the school mission, we included the further mission of making school a place which prepared people to function successfully in life. After things got better and the teachers began to believe in the children and believe in themselves, they asked "Why are our children, who appear to be as bright as everyone else, not achieving as well, or as successfully in the long run as children from middle income families?" We decided that growing up in an affluent or educated family enabled children to develop management and problem-solving skills, simply by being with their parents. What we had to do was to bring into the school the kind of experiences that would allow low income children to develop these same skills. Therefore, we developed a social skills curriculum for inner city children to institute social skills very much like the kind that existed in the pre-1940's society. Let me give you an example of what I mean. A young boy from the South was enrolled in our school by an aunt who wanted him to have a better education up North, and I put "better" in quotes. She pulled him out of that warm environment and brought him up to New Haven. On the way to work Monday morning, she dropped him off in school and kept

going. The principal took the youngster into the classroom. The teacher had had three transfers the week before, which is fairly common in inner city schools, and she managed, just through the toss of head, to say, "I do not need you, kid." The kid read the expression, looked at the class of strangers, kicked the teacher in the leg, and ran out. Now, we thought that this was a fairly healthy response, but of course the teacher did not agree. This was the typical kind of situation, under the old system, where a child would have been sent to the principal, scolded or punished, sent back to class and teased by his classmates. In response he would fight, be sent back to the principal, and go round in circles until he was labeled "disturbed." Once labelled "disturbed," he would be sent off to the psychiatrist to be fixed. Instead, we had a meeting and said "What do you think it would be like to be eight years of age and to have all of your support systems removed?" Well, immediately all of the teachers began to figure out what had to be done within the present system to make it possible for that child to make it: "Welcome Johnny" signs; assignment to the most successful youngster in the class; a whole variety of things. Then we did not stop with the child. We asked: "What is wrong with our system?" "What is wrong with the way we manage school?" "What is wrong with our transfer procedure?" Children should not be dumped into a strange school in a strange environment. So we developed an orientation program that enabled that child and other transferring students to make it. We now have a variety of similar programs all over the school. Many of the children had reasonable support from their families, despite the fact that they were poor or under stress. We changed the system so that it supported the development of these youngsters, allowed them to be successful. We are now beginning to get the evidence that many of the youngsters who were succesful in elementary school are successful in middle school as well. If we can get the money from the federal government, we will try to figure out whether they are successful in high school and in life. My point is that, by modifying the system, by understanding the impact of systems on youngsters, we can modify those systems so that children can develop well.

I feel that we can do the same in other developmental institutions that impact on the lives of children: the church, recreational institutions, television. Television is an institution in this society. There are many, many things that can be done if we recognize and understand the impact of social networks and institutions and make those social networks more sensitive to children. If we succeed, we can assist many more children and many more families in aiding their children, moving those children across the developmental pathways so that they can be successful as adults.

Let me turn, finally, to research. In my opinion, much of the research from academic institutions about what we need to do in the study of children is inappropriate and basically useless. This research was designed to meet our academic standards and needs rather than to assist the children and families that are in communities. Very often experimental and quantitative, it picks up little pieces of the system and measures them, as we might measure the hair on the tail of an elephant during a stampede. While this research might assist us in writing academic papers and advancing careers, it is basically useless in changing the experience of young people. I think that we need much more research that looks at intervention and participation beyond the individual person. We need participant-observer kinds of research, and even an ecological perspective, so that we begin to look at the interaction of all the systems that impact on families, to see how these in turn impact directly on the development of children within their families, in institutions, systems and social networks.

With that I will stop. I thank you very much.

A SOCIO-CULTURAL APPROACH TO THE STUDY OF RE-MEDIATION

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Thank you very much. This morning I overheard a conversation where somebody was reporting an overheard conversation, that went sort of like: "Who's that Russian they are talking about? Vic who?" Vygotsky is his name. The formal title of my talk is "Socio-Historical Approach to the Study of Re-Mediation." Lev S. Vygotsky founded that school. What I want to do is give a little bit of background about why I would be standing up here saying strange words like that and why I think his ideas, and those of his followers, are of practical interest. I will end up trying to talk about how these ideas might apply to children who are having extraordinary difficulty learning to read in our schools.

I want to get to modern reading instruction shortly, but let me back up and describe what it means to adopt a socio-historical approach to literacy. First, this approach emphasizes that we are talking about uniquely human characteristics of human behavior, ones which are not likely to have been invented spontaneously or be directly related to our near animal neighbors. Whatever else there is about reading and writing, if you grew up and lived for a long time on an island with no reading or writing and no one had ever heard of it, and you were there by yourself, it is extremely unlikely that you would invent the alphabet. It took about ten thousand years and one individual is not likely to get it done in a lifetime. Aspects of human behavior with a long social history are higher psychological functions. They arose a long time ago, they were there in some form at the dawning of homo sapiens, and they have been changed in social interactions as a result of historically accumulated experience.

Now, let me apply that mouthful to the notion of reading and writing. On the one hand, you can argue that the existence of writing as a function is about two or three thousand years old, depending upon how you measure it. Writing is definitely a "new" human acquisition so you wouldn't go looking in the brain for a particular writing area if writing was hurt by some kind of a brain deficit. The socio-historical approach pushes you to go deeper into the past, trace the basis of literacy all the way back to the

beginning; we could go back to Australopithecus, perhaps 300-400 thousand years ago, where you have the first evidence that somehow people are regulating their interactions with the world and each other using pieces of the world external to themselves. That is the basic property of reading and writing. The basic act of mediation involves regulating your interactions with the world indirectly...through objects that are artificial, made by human hands. It may be as simple as a mark on a stone that regulates when you meet somebody; it may be a mark on a stick to remind you you've done something before. In each case, that simple mark reorganizes your coordination with the world by virtue of its properties as a mediator. There are many early remnants of this early manifestation of pre-writing. If you go to the caves at Lascaux, if you go through all of Alexander Marschak's work on ice age people, you'll find that the activity of mediation through external signs is as old as homo sapiens. If you stop for a moment and think about Stonehenge, you might begin to ponder about the fact that very big rocks, were carried a very long way by people with no trucks or trains. Those were people who really cared. They weren't carrying those rocks for their own sakes, I guarantee you. They were carrying them because they were told that if they arranged those rocks in a certain way they could discover regularities in the universe that would allow them to predict what was going to happen next, and roughly when it would happen.

If you go down in the desert south of San Diego you'll come upon remarkable places that have this same property. On the winter solstice and only on that day, the sun rises over a particular hill. Its light slices through a particular slit in a rock where there's a drawing of a human; on another rock opposite, there is a drawing of another human. The first human has a dagger raised in his hand, and just at sunrise on that day, the sun creeps across the rock and hits the dagger. It bounces off and hits the other man. An enormous amount of human ingenuity went into figuring that out. We believe that those rock pictures, like Stonehenge, regulated peoples' interactions with the world and with each other. To repeat myself, the basic character of literacy is that we create objects to

regulate our interactions on the one hand with the physical world, and on the other hand, with our social world. Literacy then makes possible new forms coordinating in time and space. Objects mediating our interactions with the world make available the potential for new forms of higher psychological processes.

Technologies of Mediation

What's remediation all about in such a system? Well, in its root meaning, remediation means a shift in the way that mediating devices regulate coordination with the environment. A very interesting early sample of such a shift historically came when syllabaries were replaced by an alphabet. A shift from a syllabary to an alphabet creates a representation of language at a level of analysis which is qualitatively new. Alphabets make possible explicitness that can have powerful potentiating effect on people's ability to regulate their activities with each other and, as we say, to create common knowledge.

Again, if you are taking a socio-historical approach, the beginning of symbol systems that eventuate in the alphabet goes back to the initial exchange using money. The alphabet can be traced in the Middle East through simple token systems, to the bronze age with the evolution of multiple tokens scratched in clay, and then to the Phoenician syllabary. When the Greeks tried to trade through this syllabary, they ran into ambiguities which forced them to do some analysis on what the syllabary was about. This led to the fundmental breakthrough which is now the bane of lots of children in our society: the breakthrough from representing language at the level of directly communicable sound elements (syllables) to communicating through a medium in which you can not explicitly make clear what it is that you are doing (the alphabet). In order to make this difference clear, let's look at how we teach a child to say the word 'cat.' In societies where 'cat' is written as a syllable, it is represented by one sign which simply has to evoke that sound image and we can say 'cat' and you can hear me. But 'cat' isn't made up just with the units that we hear. There are three parts to it--C, A, and T. So we say those are the three parts of cat--c, a, and t. But then we say "No! no, no, they

are not really the parts. What it really is, is k, a, and t." But is it really k, a, t? No, it's not. Because in order to make those sounds I had to combine a stop and something that was operating as a vowel. You can't say a consonant by itself. You can only say it in combination with something else. So, what the alphabet represented was an abstraction, a kind of analysis that allowed the language spoken in that area of the world to be represented with an extreme degree of economy.

But we still have the problem of how to explain to kids what it is that happens when you go from k-at to 'cat.' All we can do to explain is to call it the process of blending. We stimulate it. We have a procedure. We start out slowly with k-at, k-at, saying it faster and faster: k-at, k-at. But blending doesn't work. No matter how fast I say k-at, I don't get 'cat.' That isn't what happens in reading the alphabetic representation of 'cat.' What happens is that there's a qualitative reorganization of the sound the teacher models. You start with the pieces, k-a-t. I think of it as a bird trying to get off the ground. The theory of blending tries to give the kid a start like a glider. You give the glider a push and if it just gets off there will be the right dynamic properties. Then the kids would do the synthesis, because to make use of the alphabet, you can't just have the analysis: that's how you arrived at it. You have to have analysis and synthesis. That's how you produce reading, and we can't communicate about it directly. I'll come back to that aspect of the problem because I think it's very important.

Consequences of the Alphabet

This analytic device provides enormous power. We are told that the alphabet made possible really new forms of organization of knowledge. In the middle ages and late middle ages it allowed the reclamation of vast sums of scientific work from an earlier era. When combined with the ability to smelt iron in certain ways the alphabet made the printing of Bibles possible. It supported an incredible notion for the time: you no longer had to mediate your interactions with God through Rome. (Which if you were German peasants didn't seem like a particularly reasonable thing to do under the circumstances.) You could do it, as they say, through the book. You could get directly to God through his word--The Bible.

Now, I'm not a political scientist and I don't understand all these things very well, but it seems that what we were buying in that analytic device was a great mode of cultural interaction and metaphors for living, which ended up in the 20th century producing the industrial mode of production. The argument is that the alphabet made possible modern science, modern democratic states and so on. On the other hand, you have mankind's recent achievements, the ability to send astronauts into space, see the other side of Venus and galaxies we can't imagine, as well as the power to look into your body at little pieces too small to imagine.

Alphabets and the Reduction of People to Numbers

The kind of science that we developed through the analytic principles of the alphabet allows us to be explicit, and to create models of reality that operate on high speed machines. We simulate learner systems, pull out main effects and do predictions of what's going to happen later with certain margins of error. I do not want in any way to underestimate or to denigrate the power of that way of operating in the world. But, that way of knowing the world comes at a great cost. There are a number of ways to think about what that great cost might be. First, there's this cost that has to do with education. This brings us back to a socio-historical approach to learning disabled kids. I

believe that the industrial mode of production is based upon a kind of scientific reduction which has a main effect (like an IQ score) and an error term. In such models, the error term is designed to be random; what we end up having, is the reduction of human value to a single number.

I'll take three countries to illustrate this: Japan, the Soviet Union and the United States. The ultimate embodiment of this reductionism in Japan is the score you get when you graduate from high school on a national examination. In the United States, I tell my Japanese colleagues "we don't know how to subordinate ourselves as well as you guys do, we have two numbers, verbal and quantitative." I haven't had a chance to talk to my Soviet colleagues about this idea yet. They would deny that they had one number and they would say that human values are distributed in a lot of ways. In certain times in their history they have been. That's certainly their ideology. But clearly one of the driving concerns that heads the Soviet education system today is the alienation of labor from the university. They have recreated classes based on educational attainment in response to the dominant need for efficiency in a modern industrial world.

What we find in the educational systems of this so called "information age" is that high scores on that one dimension more and more depend upon your ability to get access to, and to be skilled in, the uses of systems for coding information. Someone was joking at lunch about computers meaning a new level of alienation. I said that is absolutely right. Every step you put between human beings and their communication with each other requires a potential reduction of understanding between the two people. We do not have a good theory of all those reductions as yet. But we have a very powerful system for reducing.

Each country wrestles with this fact in their educational system. To the Japanese, the whole machine-based way of thinking is external, and new. The Russians think they have a theory that says that there's a great teacher who knows how to deal with all this technological stuff; they say they are too savvy to be fooled by technology. We in the

United States have a different way of dealing with the issue. We say that really it's the individual who is driving the system. We give everybody an equal chance and if you don't make it--it's because there's something the matter with you. We have three different countries; culturally and politically for the U.S.S.R. and Japan, the metaphors of analytic science are contrary to long standing traditions. But that doesn't seem to help. All three countries have the same problem: massive school failure, the problem of elaboration of bureaucracies, the problem of centralized control of many, many forms of individual life.

Now, here are the implications of a socio-historical approach within this kind of a contemporary framework. If research on reading is going to make a difference, it is going to have to start with an understanding of how this historical backdrop, how contemporary social-historical contexts, shape the nature of instruction and the production of school failure. It is done in the classroom, it is done at home, it is done on the way from the classroom to home, it is done in the workplace, it is done everywhere. It is systematic. If you're going to make a difference, you're going to have to be able to do it at many different levels of the system. I want to focus on the central role of the classroom teacher in this process of changing the system. First, let's consider what is a social-historical approach to the problem of curriculum, particularly the notion of basics.

To be concrete, I will discuss the idea of basic current theories of reading, identify units at different levels of the overall process. At a lower level there are features, then letters, words and finally a whole text. Each time we go "up" in the system, we get to a larger and larger set of materials. It has been traditional to break the processes involved in reading into two kinds, corresponding roughly to unit size: decoding and comprehension. Creating dichotomy is a process that our analytic traditions are good at doing. But dichotomies routinely produce a boring argument: Which comes first, decoding or comprehension? There are people who will go for phonics and decoding and there are other people who will go for basic construction of comprehension; everybody will show that the others are leaving out the essential half of the process. But the joke is

on us, because you know what our theoreticians are now telling us? My friends over in the Center for Human Information Processing who model reading processes on computers say, "We can demonstrate in infinite detail that any one level of the system is constructed of the interaction of elements operating on at least two different levels of the system. It takes three to tango: the two people and the system they create between them."

Now the question is, if you have any idea that reading requires two people and a system of agreed upon symbols, what do you do with it? My friends in the Center for Human Information Processing can simulate part of the process. The largest unit that they deal with is a single word. They can show that words can be broken down to the level of letters and features. So they can account for the process of letter identification at the top. I think that their theories are correct. I think they're modeling something very important. But they don't go far enough. Their theories and models break down when an adult is faced with a child who cannot read. This is where a socio-cultural approach can help us. We have documented how educators and psycholinguists try to teach reading to kids who failed to learn to read in school. Our tapes show the way in which, without special support systems, special cultural support systems, the individual teacher is at an enormous disadvantage in trying to get the kid over a major misunderstanding. The misunderstanding is that reading is reading individual words so that they sound right. Reading is reading aloud. The fundamental nature of reading, from a socio-cultural perspective -- that reading includes looking at the sign, knowing what's coming, knowing where you've been, knowing where somebody else is -- is absent for these children. Reading as a process of interpreting the world, is left out of the information processing theory altogether, and left out of systems of remedial reading instruction.

If you look at little children at home, children of different classes, you can find them getting different exposures to the real idea of what reading is about. They see

reading and writing modeled by their parents, embedded in settings they know something about, so that when they come to school, they encounter an early reading curriculum using that larger understanding that the parents held out for them at home. But then we see other children whose family members never got the understanding of reading-as-interpretation. They came to school with systematic misunderstandings. They're the 20%, and in San Diego its mandated 20%, whom teachers are allowed to lose. When you talk to the teachers about these kids they say, "my heart breaks for those six children. But if I were to really succeed with them, I'd lose the others." So the teacher is caught right there, trying to mediate between the failing child and those two systems: the system between the child and the world and the system of written language.

So how do you do analysis on this problem so that it's not just complaining? For a long time our work has been cross-cultural and what it helped to do was expose what it was that we were doing in the first place: the extent to which our science is really an ideology and engineering. A great deal of psychological research. It wasn't testing basic assumptions at all. In fact, we couldn't see the basic assumptions; they didn't calculate. What's so scary about this is that the Russians and the Japanese are doing the same thing. It's not that we don't know it. It's that somehow we can't embody that knowing in our social interactions with each other.

So what we are doing in our current research is showing that you can do something. We are trying to look at the children in a communicative system, not just view them in isolated activities whereby if they succeed in carrying out the activity, they are considered smart and if they fail, they are considered dumb. Our approach has been similar to that of Laura Bohanna who went off to work with the tiv. She is led to remark that anybody entering a new culture is a child again (Return to Laughter). You have to experience that. Otherwise, all you have is the ideology that they're really cute little folk and that maybe they'll grow up to be like you some day.

What we have done, practically speaking, in our current research, is to create artificial social systems using an interactional theory and using as a metaphor the processing models currently being used in cognitive psychology. We've said: let's instantiate an artificial social system. If this can be done, then in order for the reading process to occur, in order for a unit to be formed between two people and the printed word, then there have to be interactions from "above" and "below." The fundamental necessity of reading-as-interpretation of the world is that you hold in the image of reading as a whole; you hold in the constraints as a whole and then the acquisitions of the parts always come under those constraints. Then you'll never create a byway that will lead the kid into a wrong mediation of his activity with print that then has to be remediated.

What we did was to use the dramatic metaphor in a variety of different ways. Ann Brown and Joseph Campione down at the University of Illinois worked with the project and gave us one protocol to follow. Their work had to do with reciprocal questioning with seventh graders who were good decoders, but poor comprehenders. It involved setting up a dialogue about the main idea of a text between a good flexible tutor and a child: this dialogue eventually produced remarkable changes in those 7th graders' ability to read.

We changed the Campione-Brown procedures to fit our situations. We went to work with a population of poor readers from a public school. We ended up with 24 children in grades three, four, five and six. We did not want to classify them; we gave them all the standard tests that would allow you to discriminate who's LD from who's this or that. We then set up artificial environments to try to introduce them to the whole task of reading. We elaborated on the University of Illinois reciprocal questioning procedure. What we did was to take the two person game, elaborate it into the script of reading which included the following roles on three by five cards. Number one: jot down some words that are hard to say (meaning ones you don't know what the hell they are, but don't

have to say that). This is one card and it becomes one person's role. Another person has the role: jot down some words that are hard to say what they mean. Another person has the role: pick the answerer. Another person has the role: what's the main idea? Another person has the role: what's going to happen next? Now we are dealing with children for whom school is not teaching them to read. For these children teachers can be really hard to deal with: a teacher is a person who comes in and drills them on phonics and drawing in books and psycho-motor skills but they are not learning to read. The teacher is part of their public problem.

To help unlock the process, we bring in undergraduates, and we make those undergraduates big brothers and big sisters to those little kids. They don't know exactly what they're doing but that's okay. Neither do we and neither do the little kids. If you're going to have a drama, if you're going to have communication, you have to have several participants, and no communication takes place if everybody knows ahead of time exactly what's going to happen. We want communication to take place. There have to be disordinances, you have to be able to do adjusting. If you take the communication notion of what a script metaphor is about, it's not something you build in a machine, it's something you construct with people. So, we hand out the cards. It could be that there are two UCSD undergraduates and let's say three little kids at different levels. We don't know what's the matter with them, we don't know what they can't do (except they don't read much), we don't know what they are doing. We want to see if we can trap them into doing the whole task. And if we can get them into the whole task, we can then do the diagnosis. We can figure out what part of the whole task of reading these kids really don't do. We put them in an environment where they can use their intelligence to discover what the hell to do about a problem. We distribute the cards around and we hand out the text. There's no reading out loud.

Why won't we allow reading out loud? Because we discovered the same problem over and over again. The theory of reading that we subscribe to is the following: reading

is about interpreting the world. Therefore, when I'm reading I'm looking at the world and trying to figure out what's going on there and I'm using this print to help me. Maybe it's the world of my own future; it is certainly something I'm not reading for its own sake. There is no such thing as reading "for its own sake." Reading always is, eventually, about something to do with other people. Reading, as Friere said, is a way of theorizing about the world.

The children we work with have a different notion. Their notion is this: reading is a system of mediation restricting them and a text. In a particular question and answer frame where the questions are always given to them ahead of time, they only have to follow the learned grammatical and phonetic script. We found the following kinds of wonderful things happening: kids will read out loud, "John--accidentally--hung--himself--while he was playing after--school. The--police didn't know why--he did it." They go all the way through this. They pose questions about tough words. Someone picks the answerer. Then they arrive at the question, "what happened to John?" Written down on the page is "hung himself." They write the correct answer.

When a child reads aloud and it sounds correct, and then she correctly answers a comprehension question, the teacher has every right to conclude that the child is reading in the grownup sense of the term. But wait. In the next paragraph there is reference to a boy named Eric. We adults see immediately that Eric is a friend of John, the boy who hung himself. The young girl who displayed her reading ability a few minutes before starts calling for help. Ms. Griffin! Ms. Griffin! When Ms. Griffin appears the young lady complains. "How can I answer this question about Eric? He appears everywhere. It's not fair."

What we now suspect is that the previous "comprehension" wasn't what it seemed. Our suspicions are confirmed when, after working through the second paragraph, the girl exclaims incredulously, "Is this true? He hung himself?"

Our subsequent analysis shows that even when she delivered correct answers, this girl was not "reading with comprehension." She was seeking physical matches between words: where the same name appeared in several places, she denied the possibility that it could be part of a single answer. Only when her glances at the print were integrated into her real world knowledge did her reading activity come into contact with our usual concept of comprehension.

This scene is typical of systems of mediation for poor readers which are truncated, artificially truncated, and the kids can get incredibly good at operating in them. They can get so good at it that you actually think they can read. But they don't have the slightest notion of what the system of mediation we call reading is about. How will they come to have it? At this point, I want to go back to the alphabet and I want to go back to reductionism. And I want to go back to the question of remediation. The system of remediation most commonly used is one that goes back to the system of the basic unit again. It doesn't remediate the overall understanding of what reading is for; it instantiates the reductionist theory and the analytic strategy that grew up with the alphabet: Remediation goes from the simple to the complex. Of course you start with the simple. Only you've kidded yourself. Insofar as the child completely follows the procedures you're talking about, for example, sounding out K - A - T, there can be no progress.

In contrast, we argue that the procedures need to be taught as cultural vehicles to help children experience that emergent activity which will allow them to understand what you're talking about when you say reading.

The reductionist theory violates the fundamental principle that development always occurs within the framework of the whole. But psychologists and educators traditionally never teach reading as a whole activity embedded in a communicative system because it requires a social level of analysis that cannot be simulated on a computer. The activity of reading happens to have a social element in it and therefore our theory must also. It

is for this reason that a socio-historical analysis of what reading is is so important to understanding what it means to remediate this activity for some children, and what are the necessary conditions that guide its acquisition in the first place.

Now, it is not the case that people can get the idea of what reading is only if they go to school, and if their parents have been to school. And it is not that nobody can come to discover it in school. But, if you go and you look in San Diego, California at what gets taught, it is the bottom part of the basic activity of reading only. They don't get to the second part--the act of reading as a whole--until they get the first part, correct reading aloud.

First things first. What a socio-historical point of view shows us is that we should be trying to instantiate a basic activity when teaching reading and not get blinded by the basic skills. Skills are always part of activities and settings, but they only take on meaning in how they are organized. So, instead of basic skills, a socio-cultural approach talks about basic activities and instantiates those that are necessary and sufficient to carry out the whole process of reading in the general conditions for learning.

When we create such lesson contexts we find that the kids who can't read in fact can do it! Are they all reading, is this a miracle? Hell no, they have problems, a number of them have serious problems. For some you see across the board, successful take-off. Teachers report "a miracle has happened." For others, the kid is worse behaved in the classroom than he was before. He may have gained a deeper insight into just how deep a hole he's standing in. When a child sees another kid leap out and begin to experience success, he begins to have a better understanding of what a deep hole he's in and he goes down. That's development: we know that development isn't always achievement of fixed criterion. Development is system's reorganization. Reading requires social system's reorganization. From this perspective, you can teach kids to read who otherwise couldn't be taught.

There are some battles to be fought when endorsing this socio-historical approach to understanding literacy development. First, when you have people-acting-in-a-setting as the unit of analysis in psychological development, educational, experimental and child psychologists alike all take issue with such an idea. When I first started to develop these ideas at Rockefeller University, Neil Miller, who is an early teacher of mine, and a great experimentalist, said "I'm really surprised at you, Mike, for going into social psychology." When we go from having two adults in a room explicitly with a child, to having one, or the child alone with the machine, nobody understands that society is standing there as a silent partner. The child can only interact in a medium, and their medium is past history of experience with other members of the cultural group. So as a fundamental principle in our work, we put another cultural member in there. There are ways to have universities and elementary schools combine together in this sort of effort. Whether or not institutionally we could ever break loose the money having demonstrated what we can do, to actually teach the children how to read or not is a second question and an important one.

In our work we worry about how to establish credible evidence, how to be scientific. If we had two more hours I would talk about the struggles of turning video tape from what appears to be a demonstration total chaos into something that is analyzable and the analysis of which can be used to direct teaching activities.

Let me close by saying a little something about myself and thanking people in the last couple of days for the opportunity to both express my ideas and to encounter people doing things that I think are so marvelous. Starting with Bonnie's talk yesterday, I think that Erikson has a special role in showing what is possible. I think that is the most important thing this institution can do. To make your point, you have to do it at several different levels at once. That's why it's so easily defeating. I think the Center for Psycho-Social Studies also has this insight. You have to embody the cognitive science wisdom that says you need a minumum of three levels of the system in order to

understand any one of them. So, yesterday I was really pleased when Bonnie laid this all out. We've never met each other, but there was a common understanding of these things in our culture. There are, as they say, multiple voices shouting for attention. If you're going to effect change, you've got to have some theoretical vision of what you're doing. We've been there before. There is this saying: everything has been discovered before. The trick is to discover it again. It is an act of individual emancipation to discover well known truths again, because in each historical era the conditions for doing it, the resources for dealing with the problems, have shifted. The question that haunts us now is whether we can get ahead of our own human nature before it's too late.

The other great thing was to listen to Vivian Paley yesterday. Now here's where I have to speak to the question of the ideology of science. In my opinion, technically speaking, Vivian is doing experiments of the sort that my teacher, Alexander Luria, did seventy years ago. She is trying to uncover the basic logic of the system that is organizing the children's lives in the classroom, and trying to understand what it is the teacher must do to promote development. In a deep way, she is discovering her own ideology which has been organizing her classroom for years, and still organizes her classroom. Her self-reflectivity provides us a beautiful model of theory combined with practice. Yet she, herself, demeans the theoretical side of her work and disassociates herself from researchers. She's talking about those who are involved in reduction of science, those who would come in and try to take her system's understanding and render it in numbers and kill it by dissecting it. So, what do you do about that? Well, one of the things you do is you take institutions like Erikson and you find people like Vivian Paley. You find people who understand your vision of the world, your vision of the possible, and you try to connect them up. You try to get ahead of the game with a little bit of the resources you have and to read where in the society those kinds of things are going on. So you hire a young scholar like Gil McNamee and have her go through a training program with Vivian Paley and understand it. And you send her off to a theorist like me, and you

say to her, would you please put those two realms of ideas together and create innovative new systems? You train people who know how to talk to people in the community and listen to them the way Vivian listens to children: with respect, to learn about themselves. You work with the teachers who were caught in the impossible bind between the human system of control which is the ideal of education world-wide and the realities of a culture which has to select children out and reduce them to one number.